

**WETZELS et al**  
**Serial No. 10/532,806**  
June 6, 2006

**IN THE DRAWINGS**

Please add the following new drawings which include Figs. 1-4, inclusive.

Attachment: Four (4) sheets of new drawings including Figs. 1-4.

### **REMARKS**

Favorable reconsideration and allowance of this application are requested.

By way of the amendment instructions above, independent claim 1 has been revised in an effort to address the Examiner's rejection advanced under 35 USC §112, second paragraph and to further clarify the presently claimed invention.

In this regard, it will be noted that independent claim 1 has been revised so as to clarify that steps b) and c) are repeated at least 3 times, support for which can be found at paragraph [0017]. Claim 7 is new and clarifies that steps b) and c) are repeated at least 3 times and at least 3+1 times, respectively, as supported at paragraph [0019].

Hence, claims 1-7 remain pending herein for which favorable reconsideration is requested.

#### **1. Drawing Requirement**

The applicant has submitted new drawings comprised of Figs. 1-4 which are schematic representations of the method otherwise described in words in the originally filed specification. Appropriate cross-reference to the new drawing figures has also been made to the specification by way of the amendments above.

The submitted drawings merely depict in cartoon form what was already been disclosed in the form of language in the originally filed application. As such, no new subject matter under 35 USC §132 has been introduced by way of the new drawings and/or specification amendments submitted herewith.

#### **2. Abstract Objection**

A revised Abstract in compliance with the appropriate guidelines therefore has been submitted.

### 3. 35 USC §112 Rejection

The Examiner asserts that claims 1-6 fail to comply with the statutory requirements of 35 USC §112, second paragraph. In response, applicant has amended the claims so as to avoid all non-clarity issues and to render the claims fully compliant with 35 USC §112. Withdrawal of the rejection advanced under this statutory provision is therefore in order.

### 4. Art-Based Rejection

The Examiner asserts that the subject matter of original claims 1-6 is anticipated by Edwards (USP 6,422,118). Specifically, the Examiner asserts that Edwards teaches a method of splicing an endless rope comprising splitting, separating ends into groups of strands, one group being no more than one more than the other and tucking several times (Figs 1 - 5). Furthermore, the Examiner asserts that Edwards teaches the resultant spliced rope. As will become evident from the following discussion, however, applicants suggest that the amended claims presented above are patentable over the applied Edwards reference.

Specifically, applicants respectfully submit that that the subject matter of claim 1 of the present application is not rendered unpatentable by Edwards since Edwards teaches a splicing method used for braided cords or ropes and **not** to a splicing method used for ***laid rope constructions*** as disclosed by the present invention.

In addition to this significant distinction, the steps comprising the method disclosed by Edwards are fundamentally different from the steps comprising the method of the presently claimed invention. To better understand the present invention, applicant will hereinafter explain the fundamental differences between the two *modus operandi* disclosed by Edwards and present application, by following step by step the methods disclosed therein.

Applicant notes in this regard that Edwards teaches a process of joining two ends of cord of braided individual plies, wherein in step a) the ***individual plies are unbraided*** of a portion of each of the ends to be joined, leaving main braided bodies of cord [claim 1 step a), Fig. 1 and col.1 lines 21-22 of Edwards]. In contrast with Edwards, the present application teaches to split the laid rope construction in two parts, a first one and a second one, irrelevant of how many strands form the laid rope (Fig. 1 of the present application and page 1, col. 2 par. [0013]).

Edwards teaches in steps b) and c) to connect together the corresponding plies from each of the ends [claim 1 step b) and Fig. 2 of Edwards] and to pull the connected plies back through the main braided bodies of cord at different distances from the ends [claim 1 step c), Figs. 3-5 of Edwards].

In contrast with Edwards, the presently claimed invention tucks one of the parts from one direction into a first opening and tucks the other part from an opposite direction in the same opening (page 1 col. 2 par. [0014] and [0016]), and to repeat these steps at least 3 times. In addition to this, the openings are being precisely located one in respect to the other, such that the parts cross at least once all the strands forming the rope.

To further assist in understanding the present invention, there is attached hereto several photographs labeled Picture 1.1 through Picture 1.13 which illustrate sequentially one embodiment of splicing a laid rope and the resulting spliced laid rope in accordance with the present invention.

The above-enumerated features of the present invention differ fundamentally from the features of Edwards. Namely, the construction of the rope and the steps comprising the method of obtaining a splice render the method of the present invention patentably different from the method of splicing a braided cord disclosed by Edwards.

Therefore, withdrawal of the rejection advanced against the original claims under 35 USC §102(b) based on Edwards is in order.

The comments above are equally germane to the unobviousness of the present invention in view of the cited references. Specifically, applicants note that neither Edwards nor the other cited prior art measure the "efficiency" of the splice. The "efficiency" of the splice is defined as the relative strength of the splice and the strength of the original rope (page 1 col. 1 par. [0004] of the present application).

As disclosed by the present application, the efficiency of the splice obtainable by the method of the present invention is higher than 97% (Examples 2 and 3, present application), reaching 100% when the splice is made according to Example 1 of the present application. This means that a laid rope fully retains its strength under load when spliced using the method of the present invention. As shown in the comparative experiments A and B the common splicing methods yield much lower splice efficiencies that do not get higher than 93%. In addition to this, the splicing method according to the present invention is much faster than the known splicing methods. For example, in Edwards one would have to unbraid the cord into its individual plies – a process which is time consuming when a braided cord containing hundreds of individual plies has to be spliced.

In the method according to the present invention, the laid rope is readily split into two parts – a process that is almost instantaneous.

## **5. Conclusion**

Every effort has been made to advance prosecution of this application to allowance. Therefore, in view of the amendments and remarks above, applicant suggests that all claims are in condition for allowance and Official Notice of the same is solicited.

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Should any small matters remain outstanding, the Examiner is encouraged to telephone the Applicants' undersigned attorney so that the same may be resolved without the need for an additional written action and reply.

An early and favorable reply on the merits is awaited.

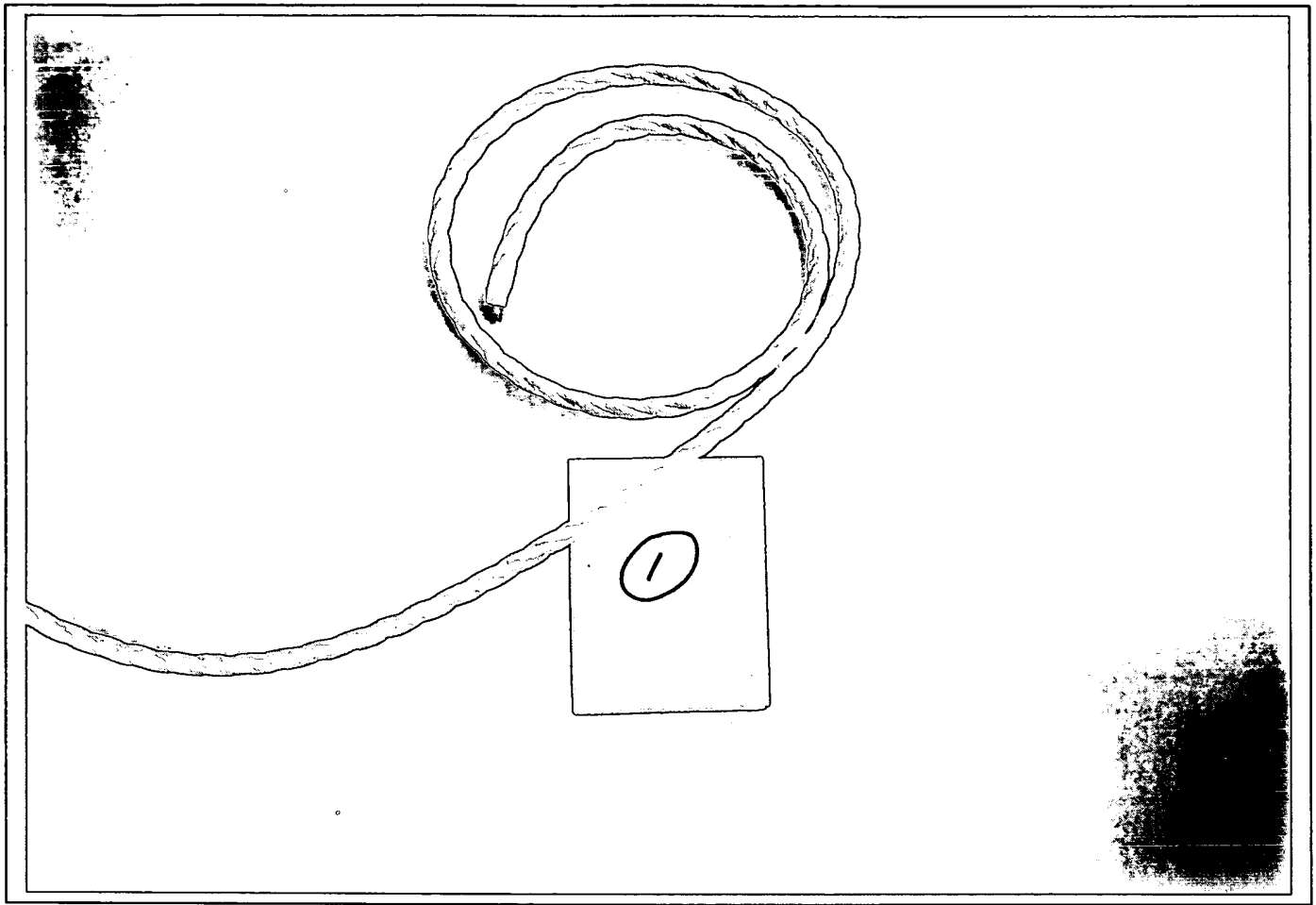
Respectfully submitted,

**NIXON & VANDERHYE P.C.**

By: 

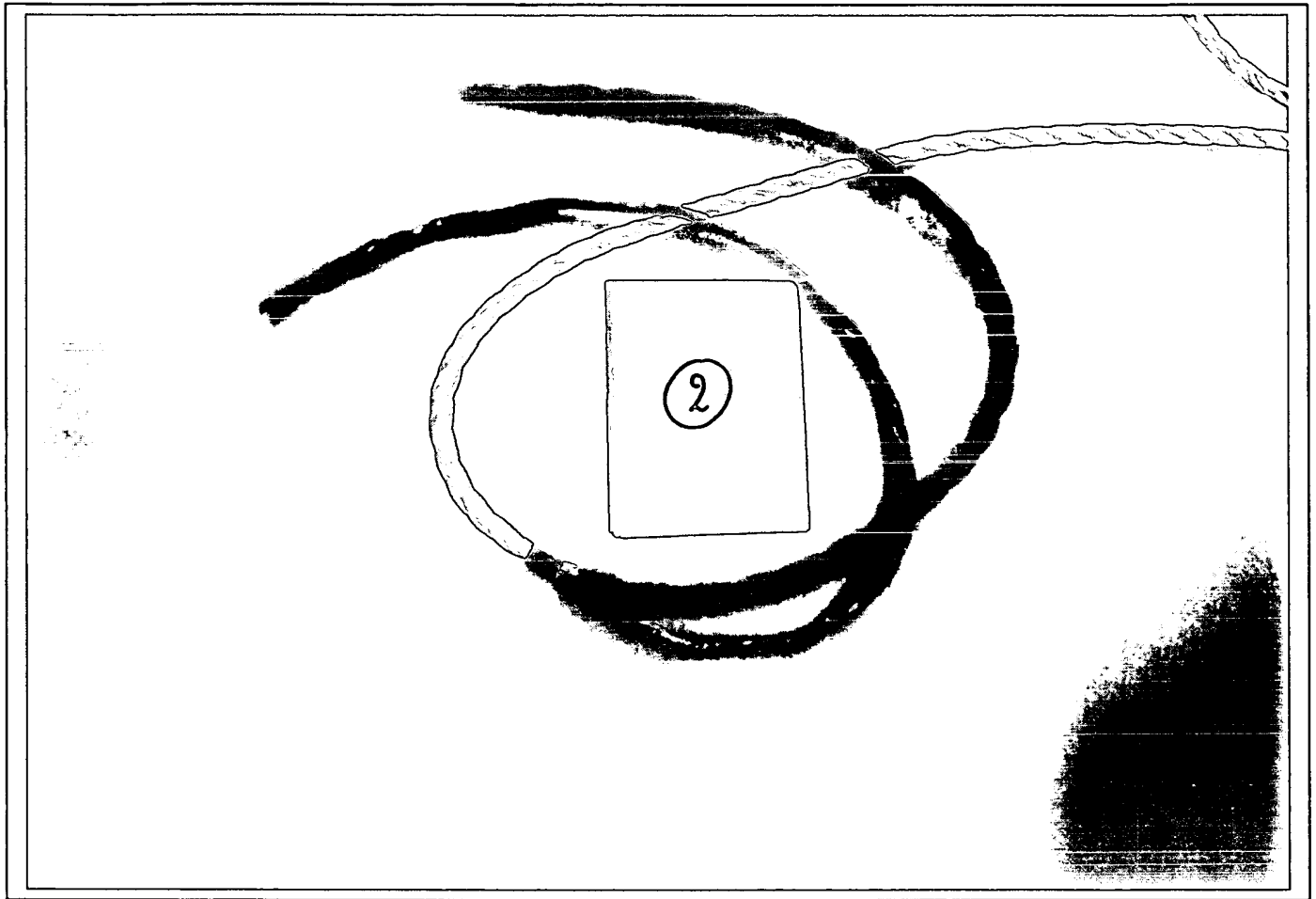
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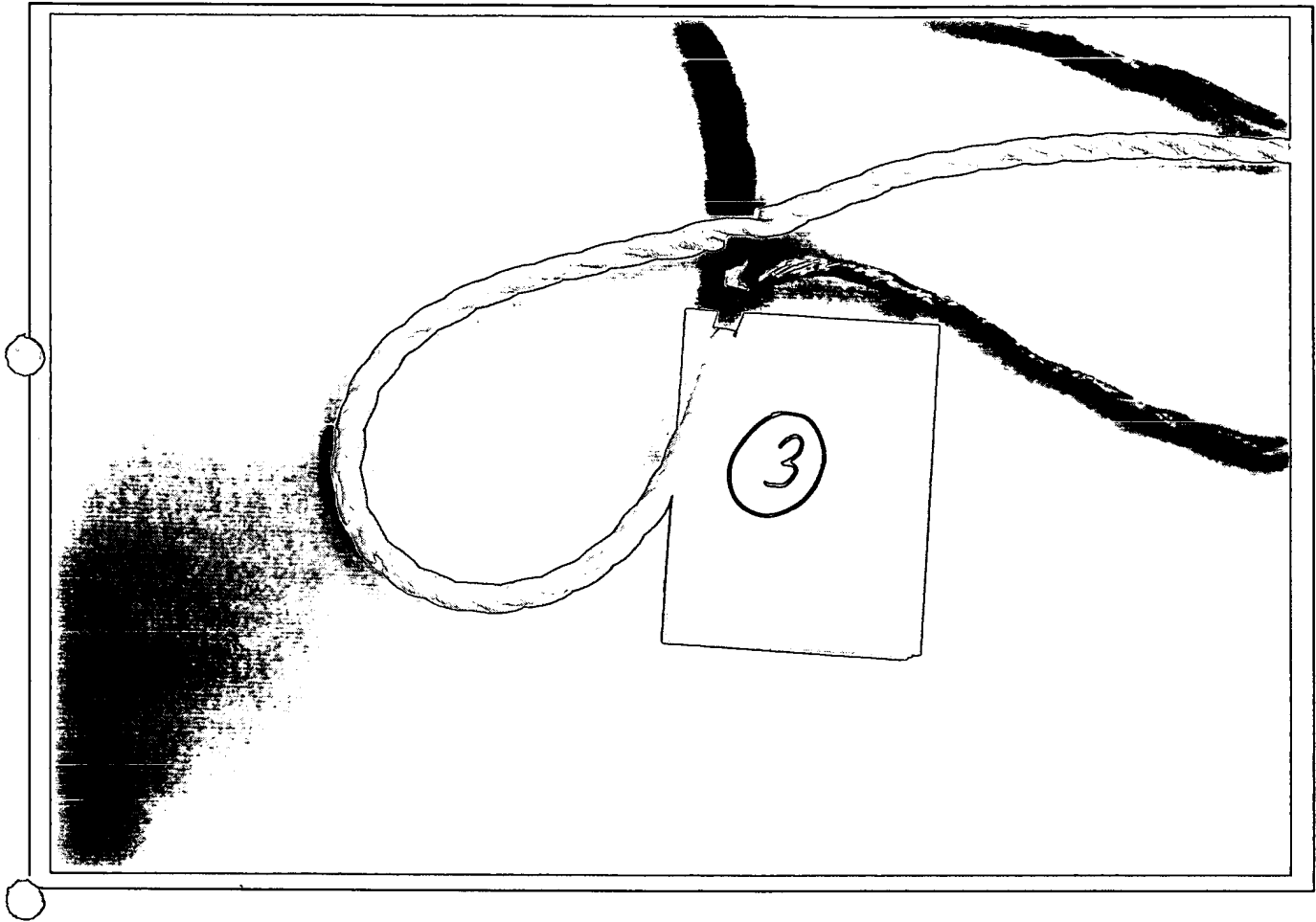
1. Splice 3-strand laid ropes.

Picture 1.1.: Start. 3 strand laid rope.



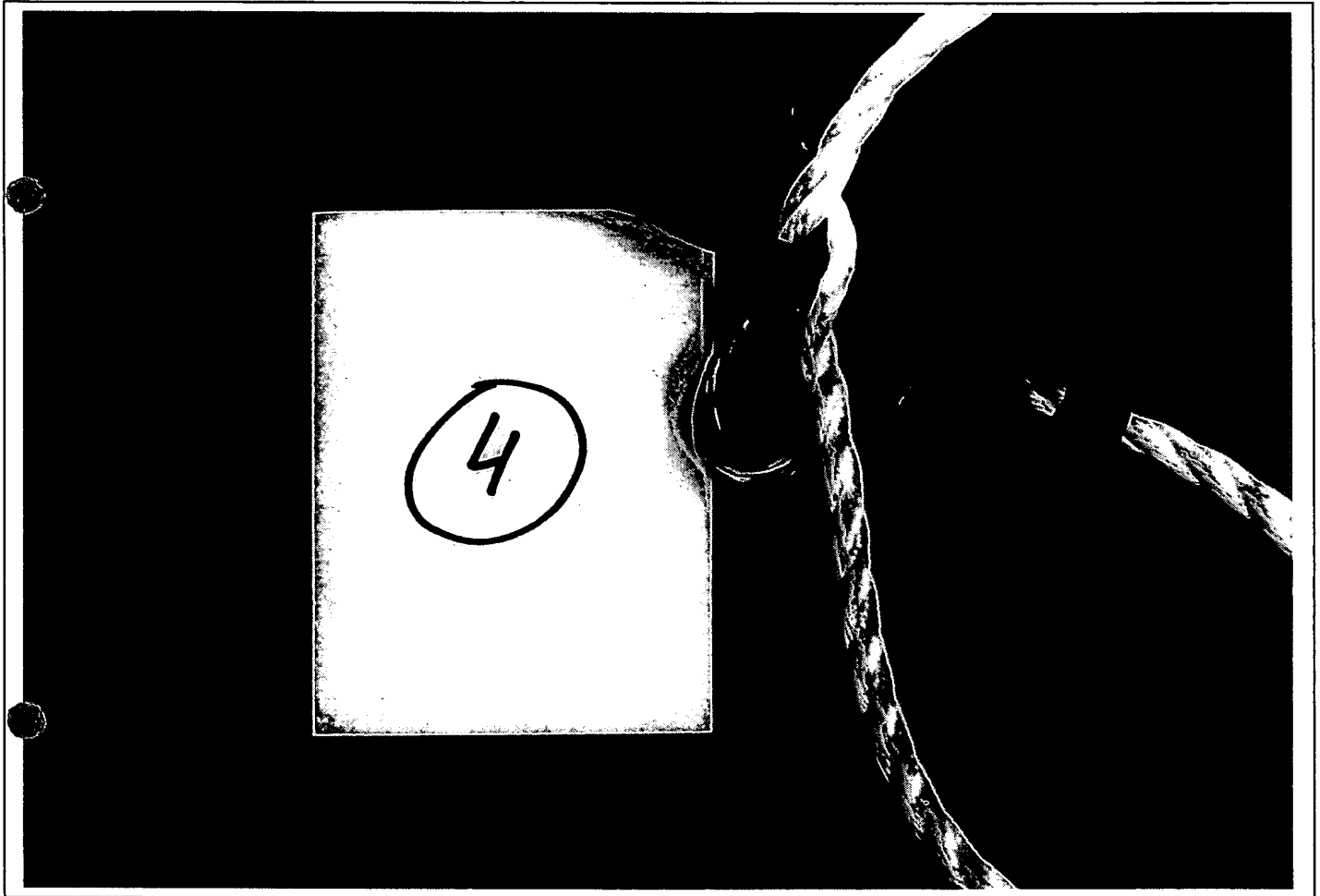
Picture 1.2. Separating strands.

The 3 strands have to be separated into two ends, one end consisting out of 1 strand (red end) and one end consisting out of two strands (blue).



Picture 1.3.

Take the double strand end and tuck under one strand of the "standing end".



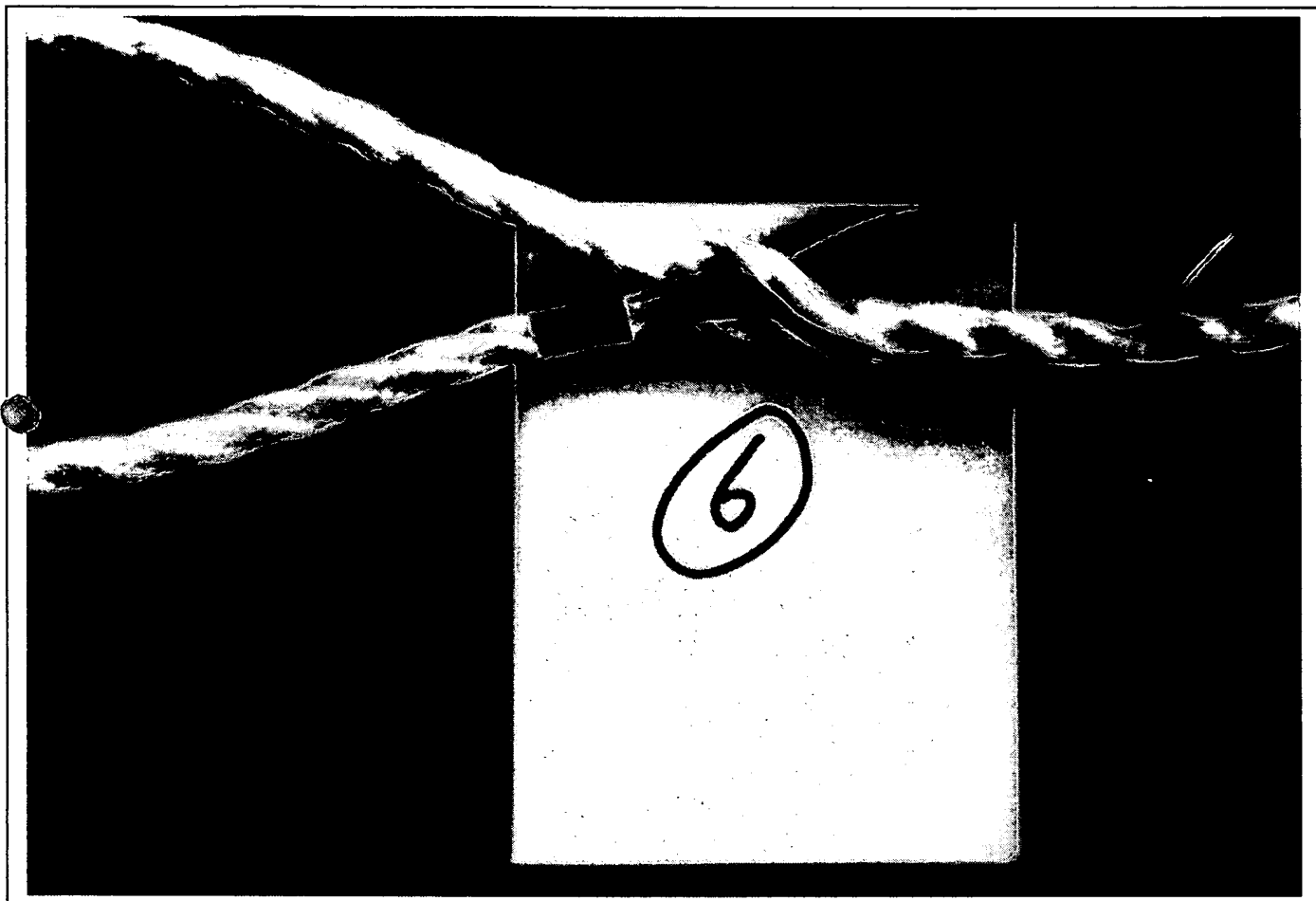
Picture 1.4.

Take the 1-strand end (red) and insert into standing part at the position where the 2-strand end (blue) exits the standing end.



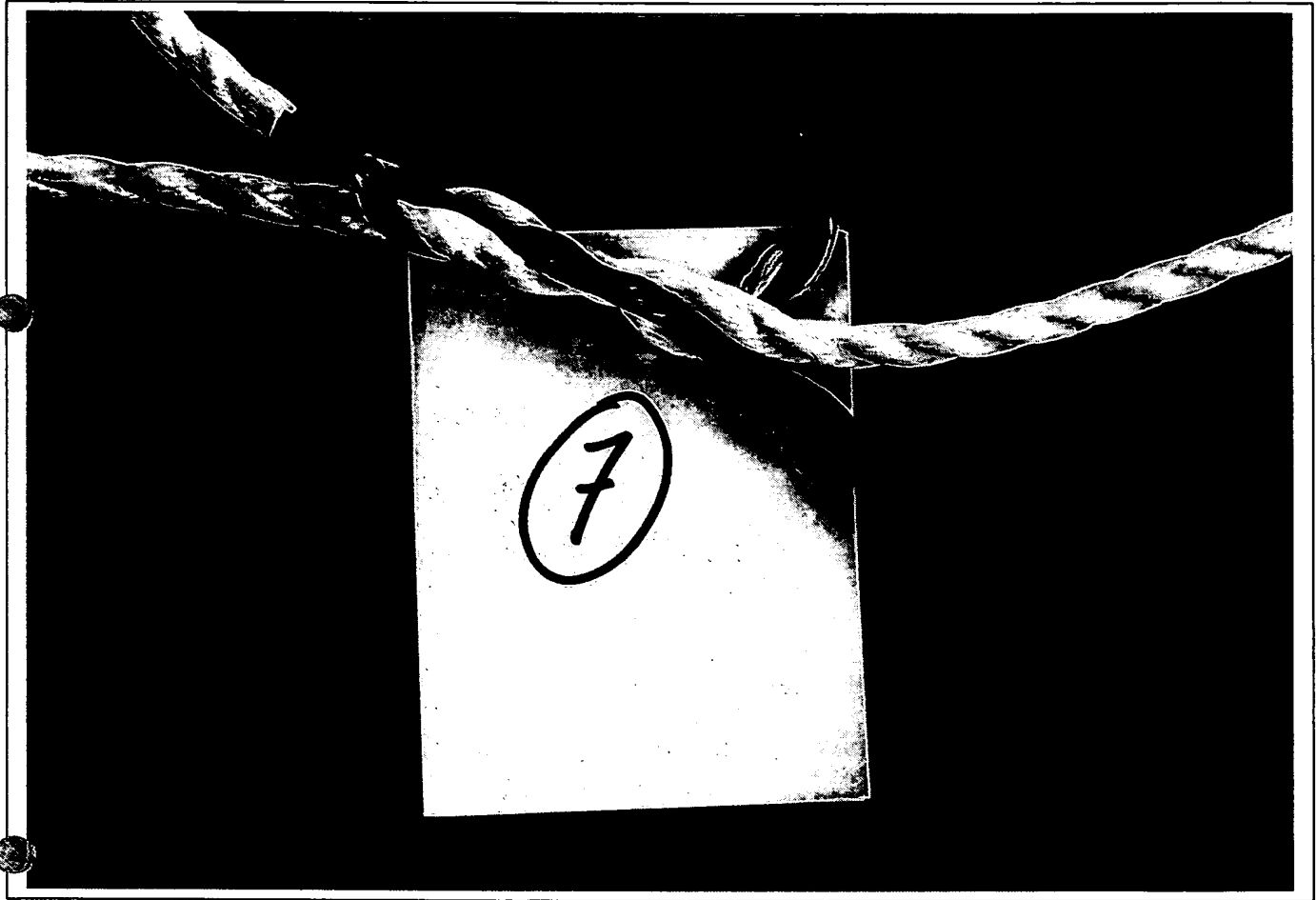
Picture 1.5.

Tension up both ends.

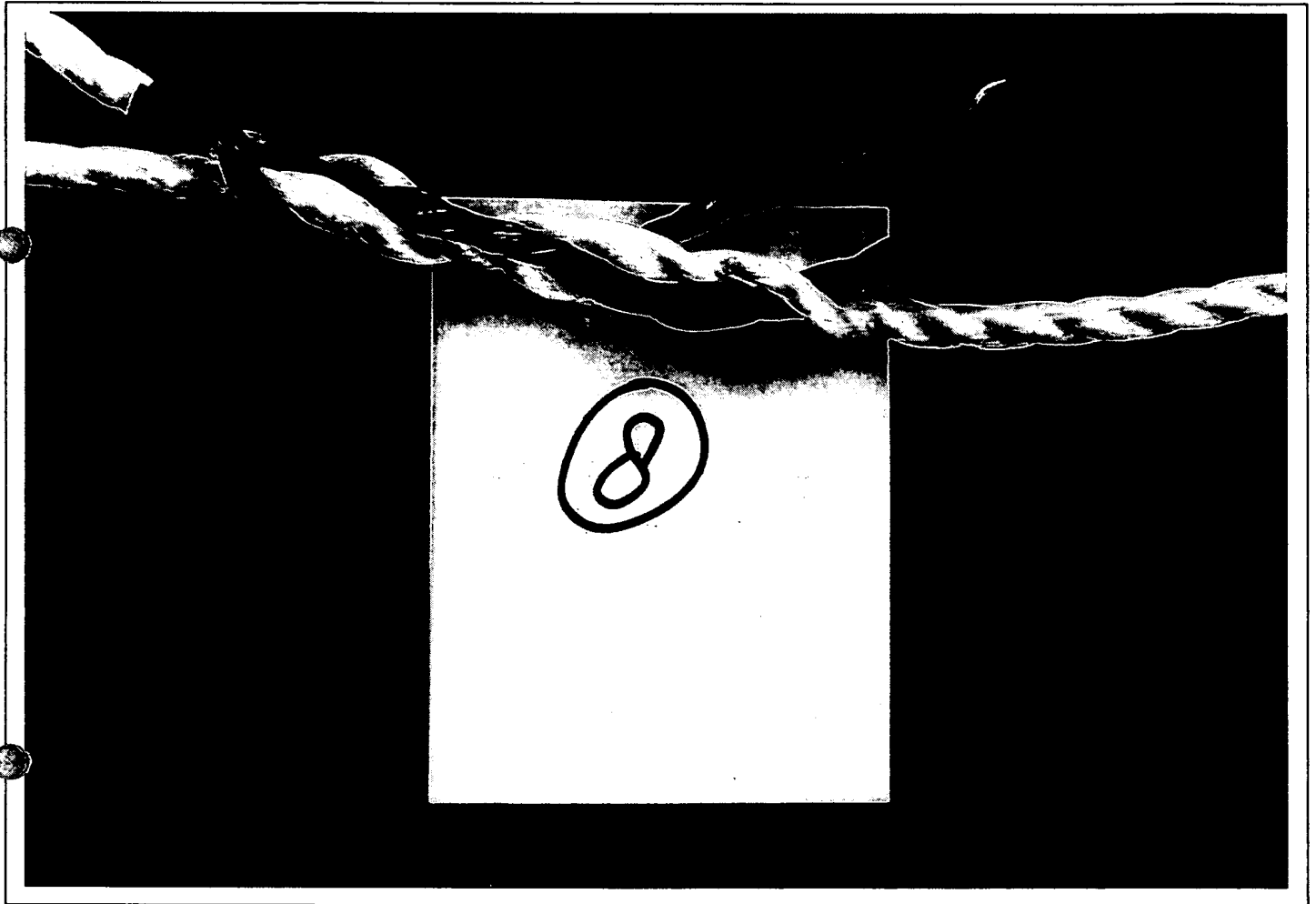


Picture 1.6.

Take the 1-strand end (red) and tuck over 2 strands and under 2 strand.  
Repeat this procedure 7 times (7 complete tucks).

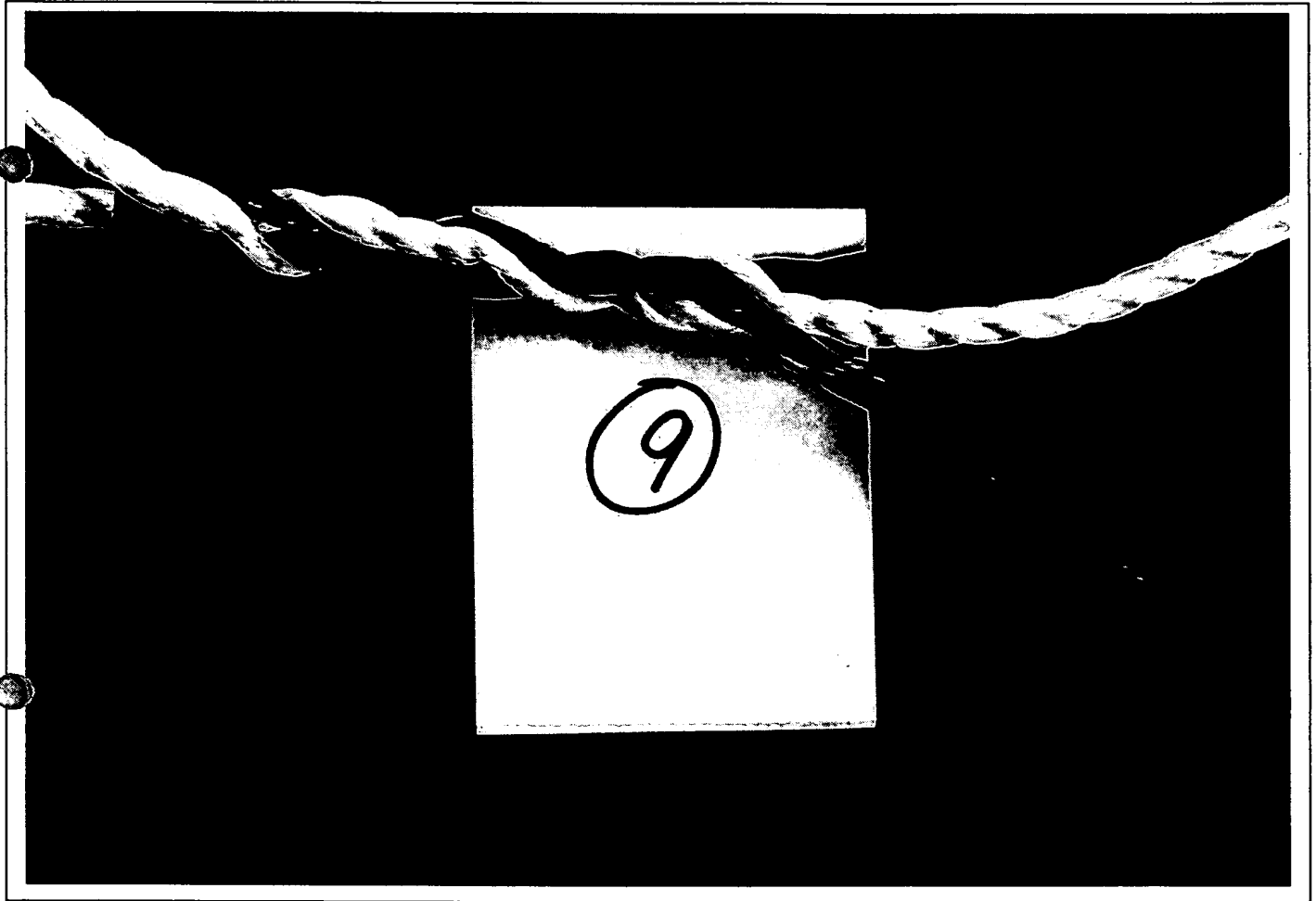


Picture 1.7.  
Insert the 2 strand end where the 1 strand end (red) leaves the standing end.



Picture 1.8.

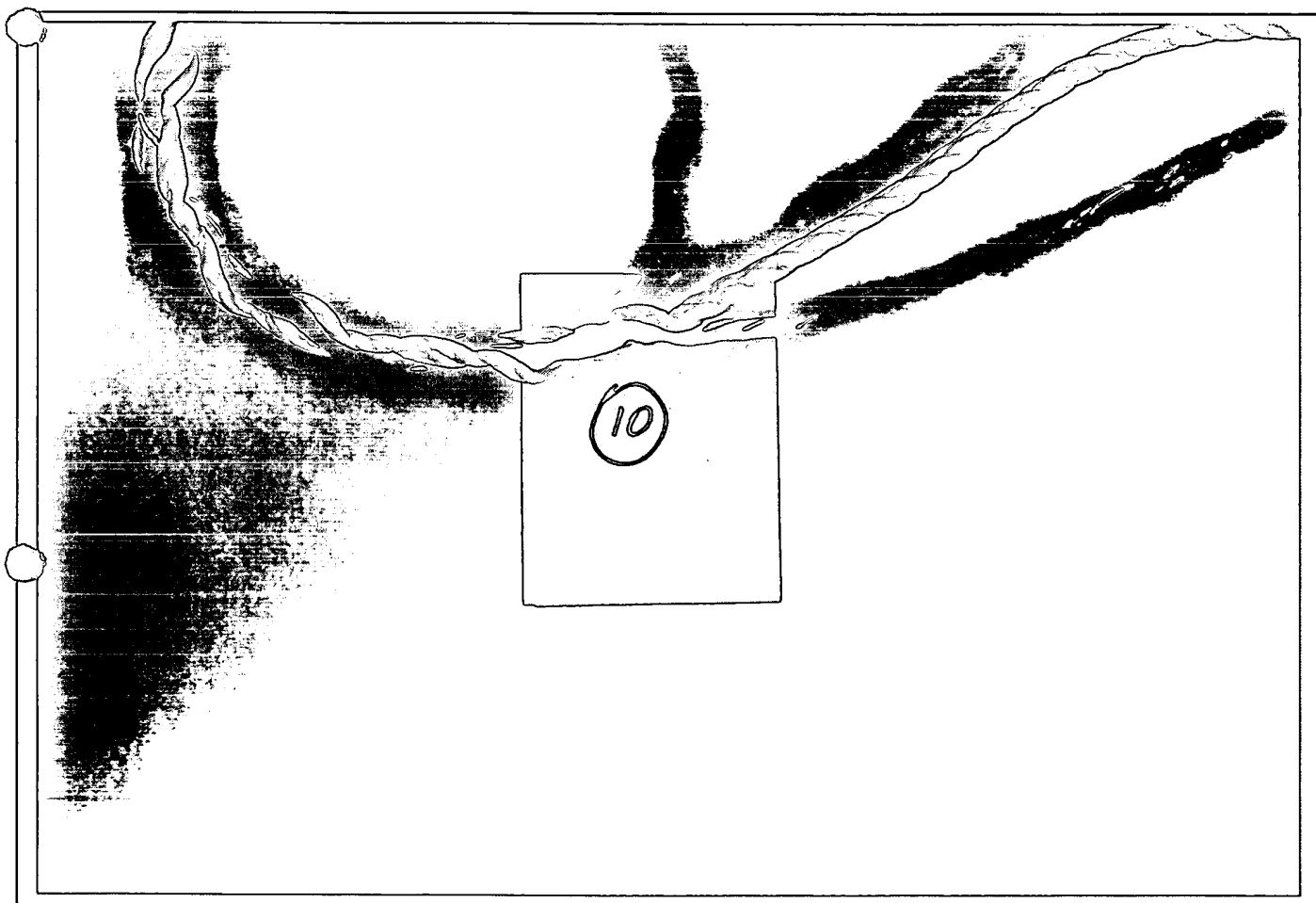
Tuck the 2 strand end over 2 strands and under 1 strand of the standing end.



Picture 1.9.

Repeat these tuck 7 times:

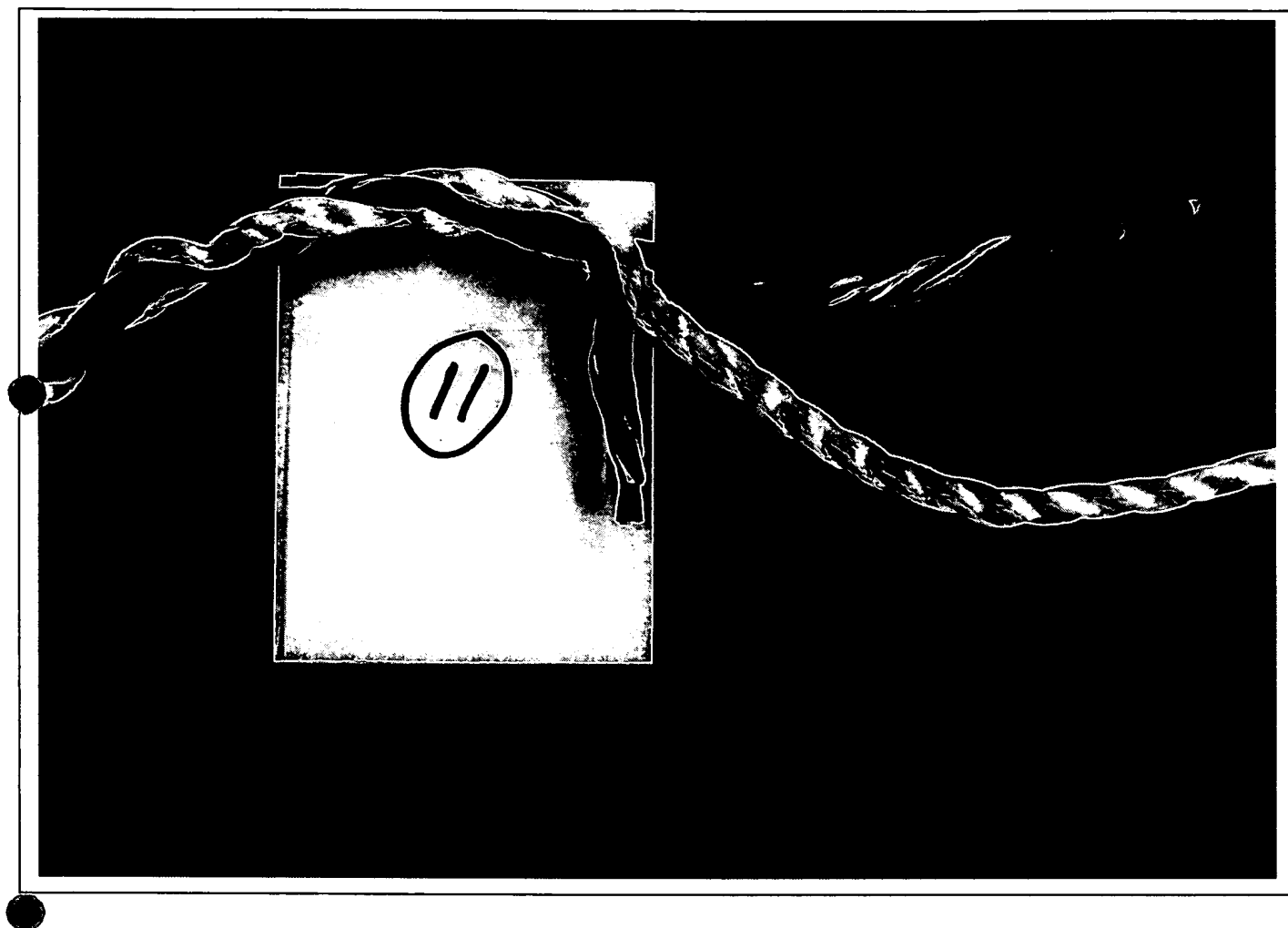
- 2 strand end (blue) : over 2, under 1
- 1 strand end (red): over 2, under 2 strands of the standing end.



Picture 1.10.

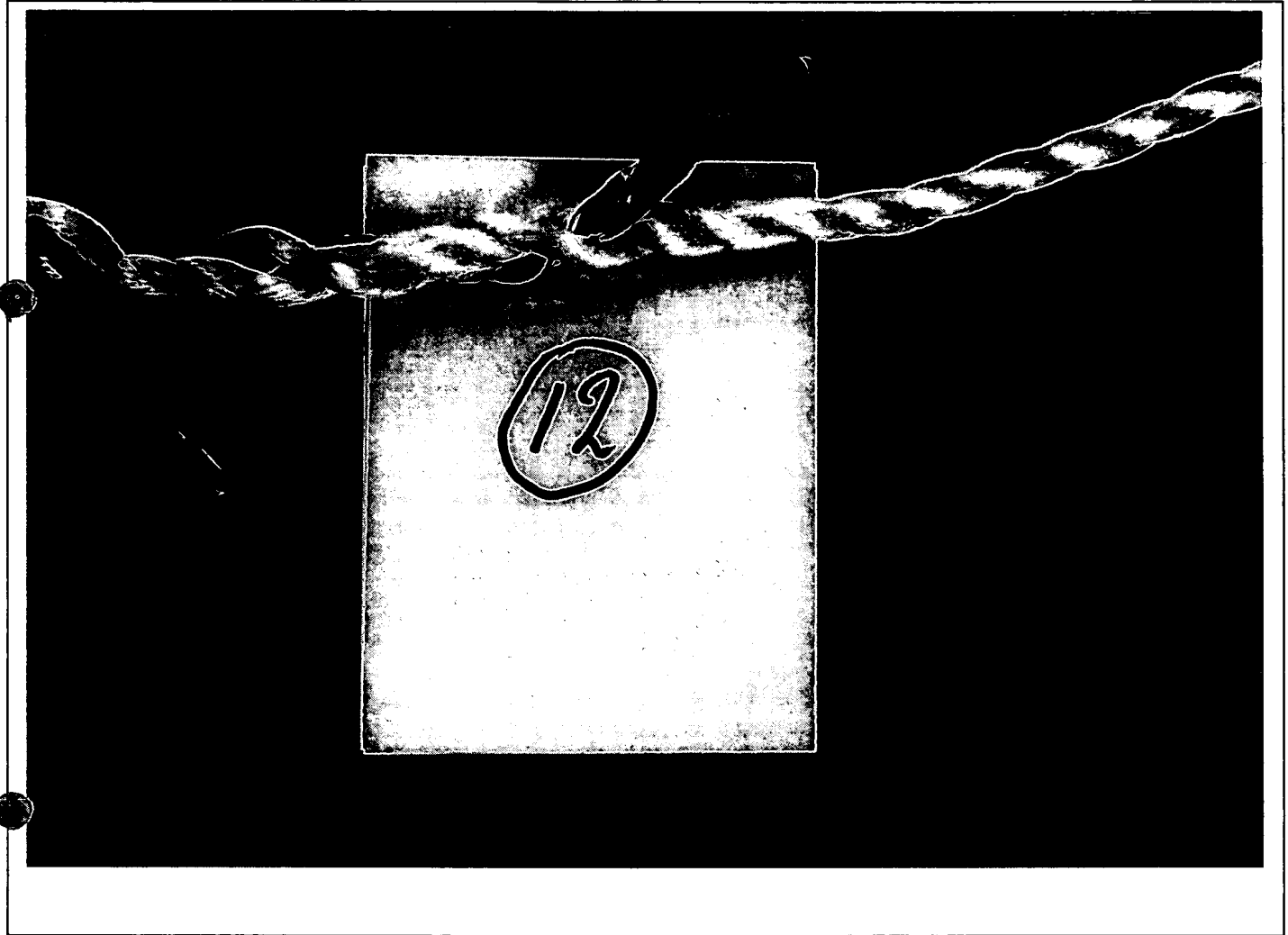
The rope with 7 full tucks.

After 7 tucks one of strand of the 2 strand end (blue) is cut.



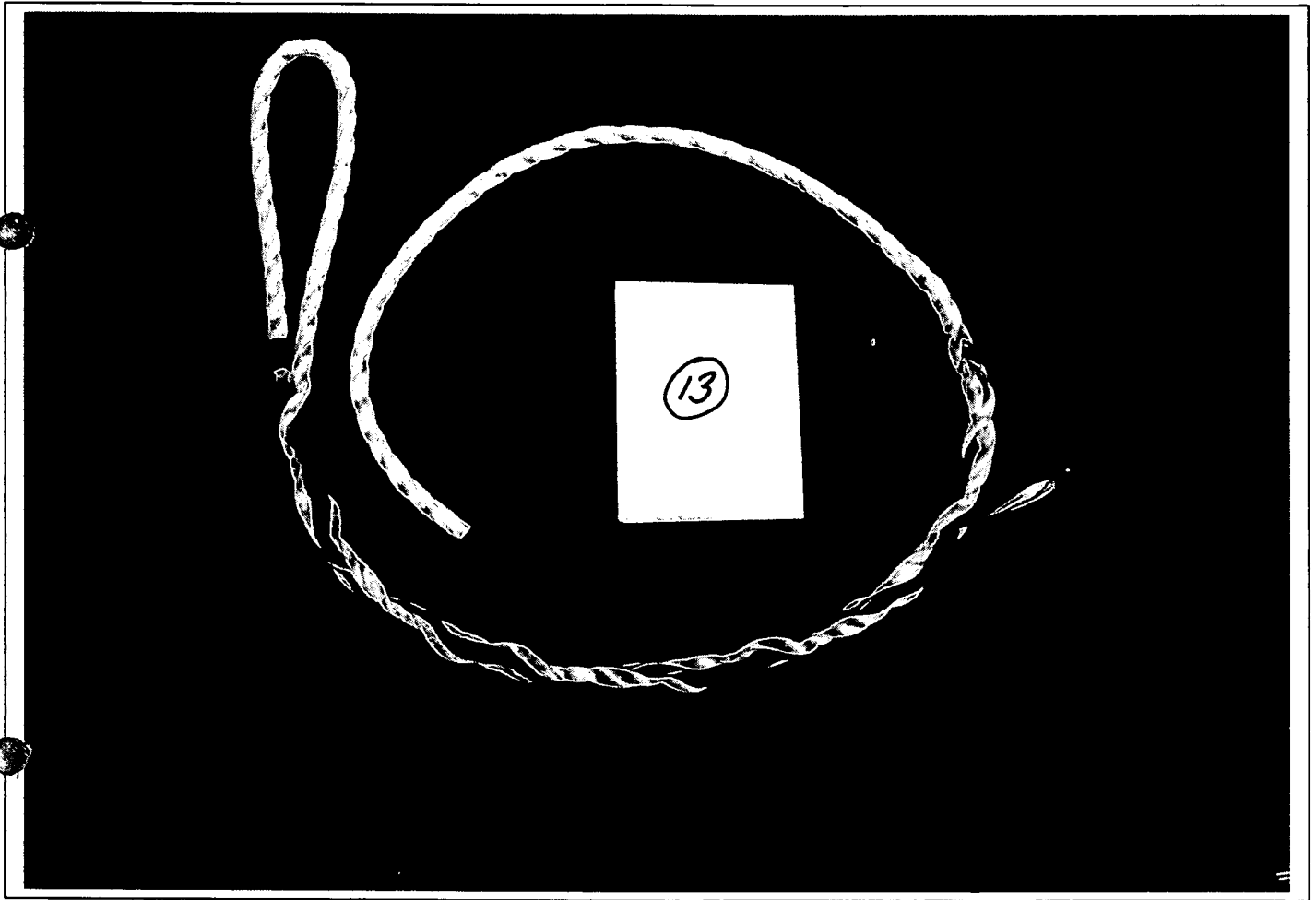
Picture 1.11.

Continue with 1 strand end (as well blue as red) for 3 full tucks.



Picture 1.12.

Make another 3 tucks with the 1 strand end which contained 2 strands in the beginning (blue).



Picture 1.13.  
Complete splice